CONTENTS

Volume 18, Issue Nos 1–8 (1989)

EARTHQUAKE ENGINEERING AND STRUCTURAL DYNAMICS

Issue No. 1, JANUARY

ANNOUNCEMENT ii

Vibration Suppression of Structures: N. D. Ebrahimi 1

A Comparative Study of Performances of Various Base Isolation Systems, Part I: Shear Beam Structures: L. Su, G. Ahmadi and I. G. Tadjbakhsh 11

Correlation Studies Using the Equivalent Base Horizontal Acceleration Method: C.-M. Uang, V. V. Bertero and R. W. Clough 33

Response of Base-isolated Buildings to Random Excitations Described by the Clough–Penzien Spectral Model: B. C. Lin, I. G. Tadjbakhsh, A. S. Papageorgiou and G. Ahmadi 49

Simplified Analysis Method for Multistorey Base-isolated Structures on Viscoelastic Halfspace: F. M. A. Siddiqui and M. C. Constantinou 63

Seismic Amplification—Mexico City: C. P. Abbiss 79

Steady State Rocking Response of Rigid Blocks Part 1: Analysis: W. K. Tso and C. M. Wong 89

Steady State Rocking Response of Rigid Blocks Part 2: Experiment: C. M. Wong and W. K. Tso 107

An Algorithm for the Optimum Design of Braced and Unbraced Steel Frames Under Earthquake Loading: G. Gülay and H. Boduroğlu 121

SHORT COMMUNICATIONS

Discussion on a Paper by N. D. Ebrahimi: G. B. Warburton 129

Notes on a Function Minimization Approach to Structural Control: N. D. Ebrahimi 135

IAEE NEWS 141

CONFERENCE DIARY 145

Indexed or abstracted by 'Abstract Jnl. in Earthquake Eng.', 'Applied Mechanics Reviews', 'American Geological Institute', 'Cambridge Scientific Abstracts', 'Current Contents', 'CITIS—Civil Engineering Abstracts', 'Engineering Index', 'Fiz Energie', 'Geo Abstracts', 'Geotechnical Abstracts', 'Geodex', 'ICONDA (Raum & Bau)', 'Indian Society of Earthquake Technology', 'International Petroleum Abstracts', 'INSPEC', 'Int Bib of Periodical Literature', 'Mechanics', 'Shock and Vibration Digest'.

Issue No. 2, FEBRUARY

ANNOUNCEMENT ii

Ritz Vectors and Generation Criteria for Mode Superposition Analysis: K.-J. Joo, E. L. Wilson and P. Leger 149

Correlation of Cylindrical Tank Wall Buckling with an Earthquake Motion Recorded at a Small Distance from the Tank: G. C. Manos, H. Shibata and T. Shigeta 169

Interaction of an Axisymmetric Body with Obliquely Incident Seismic Waves by Global Local Finite Elements: V. Avanessian, S. B. Dong and R. Muki 185

Hydrodynamic Coefficients of a Monolithic Circular Offshore Structure: M. E. McCormick 199

An Evaluation of the Ductility Reduction Factor *Q* in the 1976 Regulations for the Federal District of Mexico: A. H. Hadjian 217

A Mathematical Model for the In-plane Non-linear Earthquake Behaviour of Unreinforced Masonry Walls. Part 1: Experiments and Proposed Model: Y. Mengi and H. D. McNiven 233

A Mathematical Model for the In-plane Non-linear Earthquake Behaviour of Unreinforced Masonry Walls. Part 2: Completion of the Model: H. D. McNiven and Y. Mengi 249

Ambient Vibration Survey of the Bosporus Suspension Bridge: J. M. W. Brownjohn, A. A. Dumanoglu, R. T. Severn and A. Blakeborough 263

Elastic Wave Scattering by Inhomogeneous and Anisotropic Bodies in a Half Space: S. Hirose and M. Kitahara 285

CONFERENCE DIARY 299

Issue No. 3, APRIL

Earthquake Analysis of a Class of Torsionally-coupled Buildings: R. Hejal and A. K. Chopra 305

Earthquake Analysis of Intake–Outlet Towers Including Tower–Water–Foundation-soil Interaction: A. Goyal and A. K. Chopra 325

Recursive Evaluation of Interaction Forces of Unbounded Soil in the Time Domain: J. P. Wolf and M. Motosaka 345

Recursive Evaluation of Interaction Forces of Unbounded Soil in the Time Domain from Dynamic-stiffness Coefficients in the Frequency Domain: J. P. Wolf and M. Motosaka 365

Stability and Dynamics of Beams on Winkler Elastic Foundations: M. A. De Rosa 377

Seismic Response of Steel Frame Structures with Added Viscoelastic Dampers: R.-H. Zhang, T. T. Soong and P. Mahmoodi 389

Transient Scattering of Elastic Waves by Dipping Layers of Arbitrary Shape. Part 1: Antiplane Strain Model: H. Eshraghi and M. Dravinski 397

Transient Scattering of Elastic Waves by Dipping Layers of Arbitrary Shape. Part 2: Plane Strain Model: H. Eshraghi and M. Dravinski 417

In-plane Free Vibration of Supported/Free Parabolic Cables: G. R. Darbre 435

SHORT COMMUNICATIONS

Discussion on a Paper by S. A. Anagnostopoulos: G. G. Penelis and C. J. Athanassiadou 445

Reply by Author to G. G. Penelis and C. J. Athanassiadou: S. A. Anagnostopoulos ... 447

BOOK REVIEWS 449

IAEE NEWS 455

CONFERENCE DIARY 457

Issue No. 4, MAY

Seismic Response of Base Isolated Buildings Including $P-\Delta$ Effects of Isolation Bearings: C. G. Koh and T. Balendra 461

On Rigid Foundations Subjected to Seismic Waves: A. L. Pais and E. Kausel 475

Arch Dam System Identification Using Vibration Test Data: S. T. Mau and S. Wang .. 491

Optimal Vibration Abatement of Mechanical Systems: N. D. Ebrahimi 507

Rotational Components of Surface Strong Ground Motion: C. S. Oliveira and B. A. Bolt 517

Water Pressures on Rigid Gravity Dams with Finite Reservoir During Earthquakes: J. Aviles and F. J. Sanchez-Sesma 527

A Generalized Least-squares Family of Algorithms For Transient Dynamic Analysis: J. Kujawski and R. H. Gallagher 539

Seismic Response of the Superstructure and Attached Equipment in a Base-isolated Building: H.-C. Tsai and J. M. Kelly 551

Formulae for Errors for Initial Displacement and Velocity Problems Using the Newmark Method: G. B. Warburton 565

Effects of Concrete Cracking on the Earthquake Response of Gravity Dams: L. M. Vargas-Loli and G. L. Fenves 575

Soil–Pile–Structure Interaction Effects on the Seismic Response of a Cooling Tower: K. Ahn and P. L. Gould 593

CONFERENCE DIARY 611

Issue No. 5, JULY

OBITUARY ii

Attenuation of Seismic Intensity in Albania and Yugoslavia: M. D. Trifunac and M. I. Todorovska 617

Modal Identification of Self-adjoint Distributed-parameter Systems: M. A. Norris and L. Silverberg 633

An Improved Implicit–Explicit Time Integration Method for Structural Dynamics: I. Miranda, R. M. Ferencz and T. J. R. Hughes 643

Response Analysis of Hysteretic Multi-storey Frames Under Earthquake Excitation: S. R. K. Nielsen, K. J. Mørk and P. Thoft-Christensen 655

Analytic Solutions for Soil–Structure Interaction in Layered Media: G.-S. Liou 667

The Dynamics of Interstructural Connection to Prevent Pounding: B. D. Westermo 687

Seismic Responses of Deck-type Arch Bridges: R. A. Dusseau and R. K. Wen 701

Symmetrical FFT Technique and its Applications to Earthquake Engineering H. Katukura, S. Ohno and M. Izumi 717

Soil–Structure Interaction Experiment Using Impulse Response: A. Mita, K. Yoshida, S. Kumagai and K. Shioya 727

IAEE NEWS 745

CONFERENCE DIARY 747

Issue No. 6, AUGUST

Base-isolated Buildings with Soil–Structure Interaction: M. Novak and P. Henderson 751

A Study of Seismic Response Characteristics of Structures with Friction Damping: S. R. Malushte and M. P. Singh 767

On the Rotational Components of Seismic Motion: A. Castellani and G. Boffi 785

Influence of Lateral-load-resisting System on the Earthquake Response of Structures—A System Identification Study: A. S. Papageorgiou and B.-C. Lin 799

Diffraction Effects between Foundations Due to Incident Rayleigh Waves: Th. Triantafyllidis and Th. Neidhart 815

Non-linear Earthquake Response of Concrete Gravity Dams Part 1: Modelling: B. El-Aidi and J. F. Hall 837

Non-linear Earthquake Response of Concrete Gravity Dams Part 2: Behaviour: B. El-Aidi and J. F. Hall 853

A Method of Artificial Generation of Earthquake Ground Motion: M. Kimura and M. Izumi 867

The Use of Reduced Finite Element Models in System Identification: C. Hoff 875

Seismic Stability of Concrete Gravity Dams: P. Léger and M. Katsouli 889

Earthquake Analysis with Generalized Plasticity Model for Saturated Soils: C. S. Desai and H. M. Galagoda 903

SHORT COMMUNICATION

The Spitak (Armenia, USSR) Earthquake of 7 December 1988: A Summary Engineering Seismology Report: J. J. Bommer and N. N. Ambraseys 921

IAEE NEWS 927

CONFERENCE DIARY 929

Issue No. 7, OCTOBER

Dynamic Vertical Compliance of Strip Foundations in Layered Soils: A. S. M. Israil and S. Ahmad 933

Optimization of the Stochastic Response of a Bridge Isolation System with Hysteretic Dampers: X. M. Li 951

Seismic Response of Offshore Structures in Random Seas: Y. Yamada, H. Iemura, K. Kawano and K. Venkataramana 965

Scattering of Plane Harmonic SH, SV, P and Rayleigh Waves by Non-axisymmetric Three-dimensional Canyons: A Wave Function Expansion Approach: H. Eshraghi and M. Dravinski 983

Dependence of Fourier Spectrum Amplitudes of Recorded Earthquake Accelerations on Magnitude, Local Soil Conditions and on Depth of Sediments: M. D. Trifunac ... 999

Earthquake Magnitude Exceedance Rate and Self-similarity: M. Ordaz and E. Rosenblueth 1017

Free-field Response From Inclined Body Waves in a Viscoelastic Random Medium: Z. Hryniewicz and A. J. Hermans 1025

Bracketed and Normalized Durations of Earthquake Ground Acceleration: K. Kawashima and K. Aizawa 1041

Modal Analysis of Vibrating Viscoplastic Composite Beams on Multiple Supports: P. Fotiu and H. Irschik 1053

Coupling of Boundary and Finite Elements for Soil–Structure Interaction Problems: O. von Estorff and E. Kausel 1065

SHORT COMMUNICATIONS

Remarks on Two Papers Dealing with the Response of Beams on Two-parameter Elastic Foundations: M. Eisenberger and J. Bielak 1077

Reply to Discussion by Eisenberger and Bielak: D. Karamanlidis and V. Prakash 1079

Discussion on a Paper by Y. K. Chow, S. Swaddiwudhipong and S. A. Lim: E. Kausel 1081

Reply by Authors to E. Kausel: Y. K. Chow, S. Swaddiwudhipong and S. A. Lim 1085

BOOK REVIEW 1087

CONFERENCE DIARY 1089

Issue No. 8, NOVEMBER

Lanczos Method for Dynamic Analysis of Damped Structural Systems: B. Nour-Omid and M. E. Regelbrugge 1091

Dynamic Response of Axisymmetric Embedded Foundations: J. M. Emperador and J. Dominguez 1105

Dynamic Parameter Identification for Non-linear Isolation Systems in Response Spectrum Analysis: H.-C. Tsai and J. M. Kelly 1119

Seismic Demand in Medium- and Long-period Structures: P. Fajfar, T. Vidic and M. Fischinger 1133

Centrifugal Modelling of Dynamic Soil–Structure Interaction: K. Weissman and J. H. Prevost 1145

A Simple Non-linear Model for the Investigation of the Effects of the Gap Closure at the Abutment Joints of Short Bridges: E. A. Maragakis, G. Thornton, M. Saiidi and R. Siddharthan 1163

Reduction of Vibration by Control Forces: G. B. Warburton 1179

Study of the Earthquake Response of the Base-isolated Law and Justice Center in Rancho Cucamonga: A. S. Papageorgiou and B.-C. Lin 1189

Response of Base-isolated Buildings to Wind Loading: P. Henderson and M. Novak . 1201

Dynamic Stability Characteristics of Liquid-filled Shells: R. A. Uras and W. Kam Liu .. 1219

CONFERENCE DIARY 1233

AUTHOR INDEX 1237